What is claimed is:

1. A method of grouping network events, comprising:

receiving a stream of network events, each network event including a set of event parameters in association with a network session that corresponds to a message being transmitted through a network;

for a network event in the stream, making an initial session determination by determining whether the event belongs to a same network session as any previously received event;

for the network event, identifying information of network address translations performed by one or more devices along a network transmission path associated with the network event;

categorizing the network event in accordance with at least one of the session determination and the network address translation information; and

at a predefined time,

processing a categorized network event to identify another categorized network event, if any, belonging to a same network session as the categorized network event;

grouping the categorized network event and the identified other categorized network event, if any, into a set; and

assigning a unique identifier to the set of events that includes the categorized network event.

2. The method of claim 1, wherein the set of event parameters include source address, source port, destination address, destination, port, and network protocol.

3. The method of claim 1, wherein said network session is a communication channel established between a source host and a destination host over a network.

4. The method of claim 1, wherein the initial session determination includes comparing the event parameters of a newly received network event with the event parameters of any previously received network event, and if there is a match, the newly received event belongs to a same network session as those previously received matching events.

5. The method of claim 1, wherein each of said one or more devices is associated with at least one network address translation rule, each rule comprising a pre-mapping parameter domain and a post-mapping parameter domain for one or more event parameters.

6. The method of claim 5, wherein the pre-mapping and/or post-mapping domains of two network address translation rules may overlap each other.

7. The method of claim 1, wherein said identifying includes

identifying a first network address translation rule associated with a first device, if any, on a network transmission path whose pre-mapping parameter domain contains the parameters of the network event;

estimating a first set of event parameters contained in the post-mapping parameter domain of the first rule after applying the first rule to the network event;

identifying a second network address translation rule associated with a second device, if any, on a network transmission path whose post-mapping parameter domain contains the parameters of the network event; and

estimating a second set of event parameters contained in the pre-mapping parameter domain of the second rule after applying the second rule to the network event.

8. The method of claim 1, wherein said categorizing includes

associating the network event with any previously received event in accordance with the initial session determination result; and

associating the network event with any previously received event in accordance with the network address translation information obtained in said identifying

9. The method of claim 1, wherein the predefined time is associated with a network event.

10. The method of claim 1, wherein the categorized network event and the identified other categorized network event belong to different categories during said categorizing.

11. The method of claim 1, wherein said processing is performed in accordance with the identified network address translation information for the network transmission path associated with the network event.

12. The method of claim 1, wherein said processing is performed in accordance with network address translation information received after arrival of the categorized network event.

13. A network event grouping system, comprising:

one or more central processing units for executing programs;

an interface for receiving network events; and

a network event correlation engine module executable by the one or more central processing units, the module comprising:

a plurality of data structures for storing a stream of network events, each network event including a set of event parameters in association with a network session that corresponds to a message being transmitted through a network;

instructions for establishing a correlation when a network event in the stream belong to a same network session as another network event in the stream;

instructions for identifying information of network address translations performed by one or more devices along a network transmission path associated with a network event;

instructions for categorizing a network event in the stream in accordance with the event's network session relationship and/or the event's network address translation information; and

instructions for invoking a categorized network event at a predefined time, wherein invoking comprises processing the categorized network event to identify another categorized network event, if any, belonging to a same network session as the categorized network event, grouping the categorized network event and the identified other categorized network event, if any, into a set, and assigning a unique identifier to the set of events that includes the categorized network event.

14. The system of claim 13, wherein the set of event parameters include source address, source port, destination address, destination, port, and network protocol.

15. The system of claim 13, wherein said network session is a communication channel established between a source host and a destination host over a network.

16. The system of claim 13, wherein the instructions for establishing a correlation include comparing the event parameters of a newly received network event with the event parameters of any previously received network event, and if there is a match, the newly received event belongs to a same network session as those previously received matching events.

17. The system of claim 13, wherein each of said one or more devices is associated with at least one network address translation rule, each rule comprising a pre-mapping parameter domain and a post-mapping parameter domain for one or more event parameters.

18. The system of claim 17, wherein the pre-mapping and/or post-mapping domains of two network address translation rules may overlap each other.

19. The system of claim 13, wherein said identifying instructions include

identifying a first network address translation rule associated with a first device, if any, on a network transmission path whose pre-mapping parameter domain contains the parameters of the network event;

estimating a first set of event parameters contained in the post-mapping parameter domain of the first rule after applying the first rule to the network event;

identifying a second network address translation rule associated with a second device, if any, on a network transmission path whose post-mapping parameter domain contains the parameters of the network event; and

estimating a second set of event parameters contained in the pre-mapping parameter domain of the second rule after applying the second rule to the network event.

20. The system of claim 13, wherein said categorizing instructions include

associating the network event with any previously received event in accordance with the initial session determination result; and

associating the network event with any previously received event in accordance with the network address translation information obtained in said identifying

21. The system of claim 13, wherein the predefined time is associated with a network event.

22. The system of claim 13, wherein the categorized network event and the identified other categorized network event belong to different categories during said categorizing.

23. The system of claim 13, wherein said processing is performed in accordance with the identified network address translation information for the network transmission path associated with the network event.

24. The system of claim 13, wherein said processing is performed in accordance with network address translation information received after arrival of the categorized network event.

25. A computer program product for use in conjunction with a computer system, the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein, the computer program mechanism comprising:

instructions for receiving and storing a stream of network events, each network event including a set of event parameters in association with a network session that corresponds to a message being transmitted through a network;

instructions for establishing a correlation when a network event in the stream belong to a same network session as another network event in the stream;

instructions for identifying information of network address translations performed by one or more devices along a network transmission path associated with a network event;

instructions for categorizing a network event in the stream in accordance with the event's network session relationship and/or the event's network address translation information; and

instructions for invoking a categorized network event at a predefined time, wherein invoking comprises processing the categorized network event to identify another categorized network event, if any, belonging to a same network session as the categorized network event, grouping the categorized network event and the identified other categorized network event, if any, into a set, and assigning a unique identifier to the set of events that includes the categorized network event.

26. The computer program product of claim 25, wherein the set of event parameters include source address, source port, destination address, destination, port, and network protocol.

27. The computer program product of claim 25, wherein said network session is a communication channel established between a source host and a destination host over a network.

28. The computer program product of claim 25, wherein the instructions for establishing a correlation include comparing the event parameters of a newly received network event with the event parameters of any previously received network event, and if there is a match, the

newly received event belongs to a same network session as those previously received matching events.

29. The computer program product of claim 25, wherein each of said one or more devices is associated with at least one network address translation rule, each rule comprising a pre-mapping parameter domain and a post-mapping parameter domain for one or more event parameters.

30. The computer program product of claim 29, wherein the pre-mapping and/or post-mapping domains of two network address translation rules may overlap each other.

31. The computer program product of claim 25, wherein said identifying instructions include

identifying a first network address translation rule associated with a first device, if any, on a network transmission path whose pre-mapping parameter domain contains the parameters of the network event;

estimating a first set of event parameters contained in the post-mapping parameter domain of the first rule after applying the first rule to the network event;

identifying a second network address translation rule associated with a second device, if any, on a network transmission path whose post-mapping parameter domain contains the parameters of the network event; and

estimating a second set of event parameters contained in the pre-mapping parameter domain of the second rule after applying the second rule to the network event.

32. The computer program product of claim 25, wherein said categorizing instructions include

associating the network event with any previously received event in accordance with the initial session determination result; and

associating the network event with any previously received event in accordance with the network address translation information obtained in said identifying

33. The computer program product of claim 25, wherein the predefined time is associated with a network event.

34. The computer program product of claim 25, wherein the categorized network event and the identified other categorized network event belong to different categories during said categorizing.

35. The computer program product of claim 25, wherein said processing is performed in accordance with the identified network address translation information for the network transmission path associated with the network event.

36. The computer program product of claim 25, wherein said processing is performed in accordance with network address translation information received after arrival of the categorized network event.